

WHAT IS CLAIMED IS:

1. An image-processing camera system, comprising:  
an image pickup device that acquires image data;  
a plurality of application programs each set by use  
5 of the image data so as to have a different function;

an image pickup device controller that controls the  
image pickup device in accordance with image data  
acquisition requests associated with the plural  
application programs; and

10 a controller that activates the plural application  
programs to acquire the image data from the image  
pickup device and concurrently executes the plural  
application programs;

wherein the image-processing camera system further  
15 includes:

means for storing the image data volumes and image  
data acquisition rates necessary in the plural  
application programs;

20 means for selecting concurrently executable  
application programs on the basis of the image data  
volumes and image data acquisition rates; and

an image acquisition scheduler for determining  
image data acquisition timing and intervals at which a  
plurality of concurrently executable application  
25 programs each repeats acquiring the image data from the  
image pickup device without overlapping in terms of

time.

2. The image-processing camera system according to claim 1, further including: a scheduler that determines timing inclusive of processing which uses the image data acquired into each of the application programs.

3. The image-processing camera system according to claim 1, further including: application program group storage means that a combination of the plural application programs concurrently executed using the image data acquired from the image pickup device, wherein the application program selection means reads out data on concurrently executable application programs, from the application program group storage means.

4. The image-processing camera system according to claim 1, further including: a plurality of basic image-processing function blocks each for controlling the image pickup device in order to execute a plurality of application programs; and means which, on the basis of functional matching levels of the basic image-processing functions required, determines plural application programs to be concurrently executed using the image data acquired from the image pickup device.

5. The image-processing camera system according to claim 1, further including: means which, during execution of an application program, selects any other

executable application program on the basis of the fact that the latter application program belongs to the same application program group as that of the application program being executed.

5           6. The image-processing camera system according to claim 1, further including: means which, during execution of an application program, selects any other executable application program on the basis of a functional matching level of a necessary basic image-  
10           processing function with respect to the application program being executed.

          7. The image-processing camera system according to claim 1, further including: means which, during execution of an application program, selects one of the  
15           other application programs as an executable application program, depending on whether the image data that the particular executable application program requires can be acquired from the image pickup device during an interval within a period of image data acquisition from  
20           the image pickup device by the application program being executed.

          8. An image-processing camera system, comprising:  
          a plurality of application programs each set by using image data so as to have a different function;  
25           an image pickup device that acquires the image data; and

an image pickup device controller that controls the image pickup device in accordance with image data acquisition requests associated with the plural application programs;

5        wherein the image-processing camera system further includes:

means for displaying executable application programs; and

10        operations means for a user to specify startup of the displayed executable application programs.

9. The image-processing camera system according to claim 8, further including: means which, during execution of an application program, displays the application program being executed;

15        operations means for the user to specify shutdown of the application program being executed; and

control means for conducting the shutdown of the application program, based on an instruction entered using the operations means.

20        10. The image-processing camera system according to claim 8, further including: means which, during execution of an application program, displays the application program being executed and an additionally executable application program;

25        operations means for the user to specify startup of the additionally executable application program and

shutdown of the application program being executed; and  
control means for conducting the startup and  
shutdown of application programs, based on instructions  
that are entered using the operations means.

5        11. The image-processing camera system according to  
claim 8, further including: executable-application  
program selection means for selecting an additionally  
executable application program according to a  
particular change in ambient environment; and means for  
10       displaying the executable application program which has  
been selected by the selection means.

12. The image-processing camera system according to  
claim 8, further including: operations means that  
requests addition of a new application program.

15       13. The image-processing camera system according to  
claim 8, further including: operations means that  
requests download-based addition of a new application  
program.

20       14. A method of controlling an image-processing  
camera in an image-processing camera system which has:  
an image pickup device that acquires image data; a  
plurality of application programs each having a  
different function using the image data sent from the  
image pickup device; an image pickup device controller  
25       that controls the image pickup device in accordance  
with image data acquisition requests associated with

the plural application programs; and a controller that activates the plural application programs to acquire the image data from the image pickup device and concurrently executes the plural application programs;

5        wherein the method of controlling the camera comprises:

        a step of selecting concurrently executable application programs; and

        a scheduling step of determining image data  
10       acquisition timing and intervals at which the plurality of concurrently executable application programs each repeats acquiring the image data from the image pickup device without overlapping in terms of time.

        15. The image-processing camera control method  
15       according to claim 14, further including the step of:

        determining the timing that includes the processes using the image data acquired into each application program.

        16. The image-processing camera control method  
20       according to claim 14, further including the steps of:

        reading out the number of image data frames and acquisition rate required in each of the plural application programs, from storage means into which the two values have been stored; and

25       determining, from the read number of image data frames and acquisition rate, image acquisition timing

and intervals at which the plural executable application programs repeat acquiring the image data from the image pickup device.